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PFTFR: A LONDON CHILD (Mongolian Imbecile.)

A STUDY OF MAN AND HIS THREE FACES

BY

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With numerous illustrations

LONDON

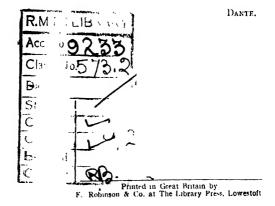
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'O quanto parve a me gran maraviglia, quando vidi tre facce alla sua testa! L'una dinanzi, e quella era vermiglia;

e la destra parea tra bianca e gialla; la sinistra a vedere era tal, quali, vengon di là onde il Nilo s'avvalla.'



'Mankind, methinks, is comprehended in a few Faces, if we exclude all Visages, which any way participate of Symmetries and Schemes of Look common unto other Animals.

For as though Man were the extract of the World, in whom all were in coagulato, which in their forms were in soluto and at Extension; we often observe that Men do most act those Creatures, whose constitution, parts and complexion do most predominate in their mixtures.

Thus we may make England the whole Earth, dividing it not only into Europe, Asia, A/rica, but the particular Regions thereof, and may in some latitude affirm, that there are Egyptians, Scythians, Indians among us; who though born in England, yet carry the Faces and Air of those Countries, and are also agreeable and correspondent unto their Natures.'

SIR THOMAS BROWNE

AUTHOR'S NOTE

Everyone remembers, but not many seriously adopt, the plan of the young gentleman who, writing for the *Eatanswill Gazette* on Chinese Metaphysics, looked up in the Encyclopaedia Britannica, China under the letter 'C,' Metaphysics under the letter 'M,' and *combined his information*.

Yet the method is sometimes quite a good one, and to-day Medicine and Ethnology certainly have need of 'Combined Information.'

In this very little book I have ventured to combine gleanings in several fields with some original observations.

But these observations, although susceptible of prompt verification by any intelligent person who cares to look around him, have been gently though firmly put out of court by those to whom they have been introduced, on the excellent ground that they appear to involve conclusions highly inconvenient to orthodox medical and scientific dogmatists.

And, as always, when observations and dogmas clash, it is so much easier to ignore what can be observed than it is to renounce what has been asserted.

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I

NARRATIVE

All students of Disraeli are aware that the vivacious Lady Constance once begged Tancred to read a newly published work, *The Revelations of Chaos*. 'You know,' she said, 'all is development. The principle is perpetually going on we were fishes, and I believe we shall be crows . . . we had fins; we may have wings.'

The allusion is, of course, to that now well-nigh forgotten book Vestiges of the Natural History of Creation, by Robert Chambers, which was published in 1844. Without this, as Darwin said, we might have never had The Origin of Species.

Chambers believed that the extant varieties of mankind result from advances and regressions, in the develop-

ing power of the human Mother, that are dependent upon the external conditions of life; as well as, to some extent, upon the suitability of marriages. He constructed, for the human race, a kind of *ichelle des êtres*, in the sense of Bonnet and the transcendentalists. He placed the Negro at the foot of the ladder and the "Caucasian" at the top. The Mongol came between.

In Chambers' words: 'The leading characters... of the various races of mankind, are simply representations of particular stages in the developmen of the highest or Caucasian type.... The Mongolian is an arrested infant newly born. And so forth.'

Chambers was then a monogenist: he had a monophyletic theory of the origin of the diverse extant human races. Like those who accept the Noachian tradition, he believed all existing human beings to have arisen from one primary human stock. But, unlike those who see, in Shem, in Ham, and in Japheth, three sons of one father from whom have sprung the white,

the black and the yellow peoples, he believed that the so-called Caucasian, or White man, has developed from a primary stock by way of stages still represented by the Negro, or Black man, and the Mongol, or Yellow man. Anticipating the doctrine now known as that of recapitulation by the individual of the history of the race, he maintained that a Caucasian foetus represents the Negro stage, and a Caucasian infant the Mongol stage, of human evolution.

Now, in support of his theory he alleged a very striking fact to which altogether insufficient attention has been paid by anthropologists and ethnologists: a fact which forms the point de départ of the present discussion.

He said that parents too nearly related tend to produce offspring of the Mongolian type—that is, persons who in maturity still are a kind of children. Although some exception may well be taken to the form of this statement, and although no one would now support Chambers' system of anthropogeny,

the occurrence in England and neighbouring countries of ill-developed persons of Mongolian type is, as Chambers saw, a fact of great importance and one strictly relevant to all hypotheses of human origins and descent.

No particular notice was taken of this fact, however, until some twenty years later, when Dr. Langdon-Down, a distinguished physician attached to the London Hospital, in a short paper that has become a classic of enduring interest, suggested the classification of idiots and imbeciles by their 'ethnic characters.'

Langdon-Down, who did not, so far as I know, accept Chambers' monophyletic scheme of human development, declared that in England we meet with some idiots and imbeciles who appear to belong to the Ethiopian or Negro variety of the human race, others who resemble Malays, and so on, while 'a very large number of congenital idiots are typical Mongols and can be fairly referred to one of the great divisions of

the human family other than the class from which they have sprung,' Dr. Langdon-Down's general ethnic classification of imbeciles has long forgotten-very unhappily-but the brilliancy of his detailed description of the Mongol or Kalmuck type of imbecile was at once admitted. Very little that is essential has been added to it, and the name of 'Mongol' is, in every hospital for children and in every asylum, applied to imbeciles of the kind that he first distinguished with precision. For Chambers, it will be noted, only wrote in general terms of certain ill-developed and childish persons, and not of a special type of imbecile

Rather oddly, however, there is a recent tendency to assert that 'Mongolian imbeciles' do not resemble racial Mongols, in spite of the fact that Dr. Langdon-Down defined the class he described by the obvious possession of characteristics of racial Mongols. This tendency arises from two sources:

(i) stress is laid upon the idiocy rather

than on the Mongolism, and (ii) for the average Englishman the characteristics of racial Mongolism are a pigtail, chopsticks, and pidgin English.

As a matter of fact, it is the 'Mongolism' rather than the idiocy that it is important to stress. For the 'Mongolism' that is so evidently displayed by a proportion of our indigenous population is far from being a mark of idiocy or imbecility, but is a kind of physical and psychical make-up that is coarsely and brutally displayed and accentuated in certain idiots and imbeciles. so are other types of make-up displayed in cretins, in cases of acromegaly, and in cases of what we call dystrobhia adiposo-genitalis. Yet, as is well known, conformity to these types may be recognised in distinguished families and persons.

The problem of Mongolism amongst us has then far greater importance than attaches to a question of purely medical interest.

It has indeed long been known to literary and iconographic artists that

in Western Europe there are many persons who display physical characteristics of the Mongolian races, and that these persons, though often 'original,' are also not infrequently gifted.

No jest is more popular, in French comic papers, than one representing a recruit from certain rural districts as a Chinaman; no one who has passed observingly through certain French villages can have failed to notice many charming and intelligent girls of twelve or fourteen who would make delightful little geishas at a fancy dress ball; and Marcel Prévost more than once makes allusion to the Mongolian stigmata and slightly fissured lips of his fascinating if frail heroines.

Again, one of the most celebrated of living Frenchmen, long known as 'le vieux Tatar' was in *The Times* of March 12th, 1921, thus described by Mr. Lansing:

'...he suggested in face and figure a Chinese mandarin of the old Empire. I say this with all respect for the man whom I would describe. He

had the sallow complexion, the prominent high cheek bones, the massive forehead with protuberant brows, the slant of the dark eyes, the long downcurving grey moustache, the short neck, the broad rounded shoulders. and the bulky body. As he sat in the Council Chamber with his clenched gloved hands resting on the arms of his chair, his eyes with their raised brows and heavy drooping lids, and his features immobile and expressionless, he might have been the model for a bronze Chinese statue of Buddha. He was a striking type, indicative of intellectual force. . . Massive, Mongolian, and impassive, he watched the course of events with Oriental stoicism. . . '

A very similar physical type has been described by Lucas Malet, in her powerful novel Adrian Savage. Here the unscrupulous solicitor who is one of the chief figures in the tale is spoken of as a kind of huge infant, with a flat Mongolian face garnished by lank and straggling hair, with a short thick

neck, huge paw-like hands, and an ungainly gait.

Indeed, it is no exaggeration to say that, without entering a hospital or an asylum, any ordinary observer to whom the marks have once been pointed out, may easily observe within the compass of a day's ramble in London a range of Mongolian or semi-Mongolian types, amongst our native Cockneys. If investigation is pursued, and the public elementary schools, the hospitals, the asylums, and the infirmaries are visited, other Mongolian types, associated with more or less mental defect, may be picked out. But, in these latter, there is something more than Mongolism to be seen. There is the suggestion of the ape-and of a particular ape - that Lucas Malet wrote into the picture in Adrian Savage.

Some of these types may be briefly sketched:—

I. In public infirmaries and in workhouses, are to be seen many feeble infants who do not long survive birth, dying of pure inanition or of respiratory

disease. They are obviously devoid of the intelligence normal for their age; they are of Mongolian facies but are even more simian than Mongolian. They represent the 'Infirmary Mongol.'

II. At our great hospitals we see children, aged between six months and four or five years of age who, brought because they are 'not getting on,' or by reason of some croupy or other respiratory trouble, are obviously backward mentally as well as physically, and who are definitely Mongoloid in their make-up. These children represent the Hospital type of Mongol: the weaker die, but some improve and pass into other spheres of observation. Others fall still more into arrears of development and are recognised ultimately as imbecile.

III. In asylums for imbeciles and idiots we meet with boys and girls, aged between seven and fourteen, who—classical Mongolian imbeciles in the sense of Dr. Langdon Down—represent the Asylum type of Mongol. Some of these, indeed many, die before puberty.



Fig 1. AN "INFIRMARY MONGOL."



Fig. 2. A "HOSPITAL MONGOL."

[Jace p. 16.



Fig. 1. AN "ASYLUM MONGOL."
(Dr. Shuttleworth's Cace)

PLATE III.



Fig 2. A KIRGHIZ MAN

Racial Mongol).

[face p. 17.

Those who survive generally undergo such physical changes, at puberty or later, that the Mongolism is 'masked' and not evident save to those who pay special attention to the subject.

IV. Those who examine large numbers of school-children recognise, boys and girls who, during their 'first infancy' have been Mongols of the Hospital type, but who, though still backward, have not lost so much ground as might have been anticipated. These children, though not imbecile, are yet often difficult. They are 'odd,' yet lovable: they may enjoy a reputation as 'comics': they may be industrious, but they never quite achieve full success.

This 'School' class of Mongol, is susceptible of subdivision. Some of the girls are very definitely 'Japanese' in face; others, with neat heads, dark hair, bright eyes, and prominent jaws well filled with large white teeth, are rather Malay in appearance. The boys are often quite like little Chinamen,

but sometimes are Tartar or Kalmuck in head and face form.

V. Adult Mongoloids are in England more numerous than might be thought, and many sub-types may be distinguished. Roughly speaking, there is a high and a low grade. The lowgrade individuals, who have almost always some simian stigmata, rank amongst life's failures. A criminal doctor, a bankrupt parson, or a more than commonly knavish solicitor, is not infrequently of this class. The women are ineffectual persons, even in vice. Superficially attractive when young, after middle life they become myxoedematous, while their male homologues degenerate into paunchiness. Many such may be seen in the shabby genteel suburbs and in the County Courts. Micawber was one of them. and Dickens' description with Phiz' etchings serve well to illustrate one kind thereof.

Mongoloids of the higher grade sometimes achieve marked success on the stage, in the professions, and even in

Parliament. But they remain, in a very real sense, a race apart. For better or for worse, they are not quite as are other men and women around them. They are, indeed, Mongols expatriate.

VI. Lastly, we see around us many men and women, not easily or greatly distinguished from their fellows, who would justly resent the epithet of Mongol, and yet do display, in head form, in feature, in proportion, in expression, in posture, or in the morphology of this or that organ or member, some one or more of the *indicia* of racial Mongolism.

These people are in no sense defective mentally, though they vary a little from the common ruck in this or that trait, as we see. But they have certain tendencies to disease which are best appreciated when the racial tendencies are understood. And it is in dealing with persons of this class that the physician has most need of the help that comparative psychology and anthropology can give him.

Now, before we can pretend to deal with the problem already stated—that of the occurrence of persons conforming to Mongolian types amongst populations such as those of the British Isles -it is necessary to consider another matter, viz:—the geographical ethnographical distribution of these 'Mongoloids' among non-Mongolian Since there has been no peoples. general recognition of the occurrence in Western Europe of Mongoloids who are not imbecile or idiotic, whilst on the other hand there is a considerable literature relating to those who are, it is best to take as our standard 'Mongoloid' the classical imbecile of Langdon-Down, well represented on the frontispiece of this book by the picture of a London child who came under my care a few years ago.

It is also necessary to define the sense in which the terms 'Mongolian races' or 'Mongolian division of the human race' will be used. Dr. Langdon-Down, writing many years ago, by the word Mongolian intended to refer









Fig. 1. YELLOW MAN, (A Japanese Priest.)



Fig. 2. BLACK MAN.
(A Congolese Negro.)

PLATE V.

to the Mongols of Central Asia; he differentiated Malays and North American Indians from the Mongols, proprement dits. Nowadays it is usual to use the word Mongolian in a larger sense, and the Mongolian division of humanity comprises all the yellow or red races with lank hair, speaking agglutinative or monosyllabic tongues.

If then the Mongol of Central Asia stands as the prototype, we have, as members of the great Mongolian family the Sinitic, or Chinese peoples, the Malays and other Southern Mongols, the many Siberian peoples, the Japanese (who are not wholly Mongolian), the Eskimo, and the North and South American Indians.

The Mongolian division of humanity being thus marked out, we may distinguish the true Black, or Negro, and may place Bushmen and Hottentots as perhaps in some sense intermediate between the Negro and the Mongol. The large group of peoples left, allowing for certain omissions made for the sake of brevity, and with the exception of the

Australoid aborigines (who seem as it were to find place behind the Negro and the primitive 'White') is that which in times past has been called Caucasian, Indo-Aryan, and the like, and which may be indicated here as including the peoples of Western, of Central, and most of those of Northern and Eastern Europe, together with the Semitic races and those referred to as Indo-Aryan. We may recognise this group without prejudice to theory in respect of its origins.

To be as simple as possible, we may speak in the old-fashioned way of the White, the Yellow, and the Black divisions of humanity, it being well understood that most non-Mongolian peoples of Asia are included in the White division.

The first point then is, that since we have for the moment nothing to do with imbeciles who are racial Mongols our field of enquiry is limited to that covered by the 'White' and the Black groups. Now this is singular: there is absolutely no authentic account

of any 'Mongolian' imbecile having been seen amongst a Negro population, except when one or other parent has been a 'White', a racial Mongol or else of Hottentot descent. Dr. Williams, Superintendent of the Kingston Asylum at Jamaica, tells me that he has never seen or heard of a 'Mongol' amongst the Negroes in that island, and enquiries made elsewhere have led to the same kind of response.

We must conclude then, in respect of the non-Mongolian peoples, that 'Mongolian' imbeciles are found only amongst the 'Whites.' They can be found among the Chinese, but no Mongolian imbecile has yet, so far as I know, been seen amongst the peoples of India who are free from all admixture with Mongolian races.

A very important question is raised by the observation of Dr. E. Cautley that cases of Mongolian imbecility are at least very rare amongst the Jews²³. I am in entire agreement with him and would go farther, saying that not one fully investigated case of 'Jewish'

Mongolism has yet been reported. It is true that Dr. Reginald Langdon-Down (who has so ably pursued the investigations of his distinguished father) says he has seen just one professed Jewess who is a Mongolian imbecile: but he has not been informed of her ancestry or parentage. Feldman certainly has stated Mongolism is very common amongst the Jews21; but he gives no details or cases, and it is possible that his statement has been based upon misapprehension. Many European Jews are not pure racial Jews, but descended from the Mongolian tribe of Chazars who, after conversion to Judaism, founded the once powerful Chazar Empire in South-Eastern Europe.

Dr. Kagan tells me that, during twelve years of hospital work at Jerusalem she has never seen traces of Mongolism amongst either Arabs or Jews from the Yemen. Those Jewish Mongoloids she has seen have been either 'Russian' or from Bokhara.

Whilst therefore it cannot be

positively asserted of the Jews, as of the Negroes, that Mongolism does not occur amongst them, it may be said that there is no evidence that pure Semites ever give birth to 'Mongols.'

On the other hand, there is ample and positive evidence that 'Mongolism' with or without imbecility does occur amongst the so-called 'White' populations of: (1) Western and Central Europe; (2) The British Isles and Dominions; (3) The United States of America.

Speaking more particularly, it may be said that Mongoloid imbeciles are met with in parts of Germany, in Switzerland, in Italy, in Spain, and with considerable frequency in France.

There are certainly many reports of Mongolism amongst the 'pure' Scandinavian peoples, but in Norway and Sweden it is as difficult to exclude the Finnish and Lapp influence as it is to exclude that of the Tartar and the Hun when it is a question of Russia and Eastern Europe generally.

In the British Isles it appears that

Mongolian imbeciles have been noted frequently in the Hebrides, in South and West Ireland, in South Wales, in Cornwall and elsewhere. In those parts where Beddoe recognised the persistence of an 'Iberian' type of Turanian affinities they are common.²²

In France, as has been hinted, Mongolism is pretty common, especially in certain districts such as Brittany and the Auvergne. Cases are said to be frequent about Rheims and Caux. I have seen many French men and women of Mongoloid type from Toulouse and its neighbourhood.

To resume then, in a few words, what is known about the ethnographical distribution of cases of 'Mongolian' imbecility, it may be said that such are not seen amongst the Blacks, and are not known to occur amongst the Aryan populations of Asia, or even amongst the Arabs and pure Jews.

They do occur, on the other hand, amongst those 'White' peoples so generally spoken of as Nordic, as Alpine, and as Mediterranean.

A curious point now arises. Allusion has already been made to the simian characteristics noticeable in Mongolian imbeciles and some Mongoloids. Indeed, for some years past vague attempts have been made to 'explain' Mongolism as in some way or another a reversion to the ape.

In 1906, Dr. Reginald Langdon-Down, speaking of the imbeciles described by his father, said that, since the characters noticed in them which suggest Mongolian features and build are constantly associated with other features not characteristic of the Mongolian race, any 'reversion' indicated must be a reversion to a type even farther back than the Mongol stock.¹² In other words, the Mongol imbecile was by him regarded as in some respects pre-human, rather than human, in 'type.'

But where are we to seek for an image of this pre-human type? And can it be said that the characteristics of *racial* Mongols are, from our point of view, in any degree or sense pre-human?

Obviously, the question of Mongolian imbecility opens up the whole problem of the relations and differences between 'White,' and Yellow, and Black Man, and between extant man and his predecessors or ancestors. Of this, something will be said hereafter; it is now necessary to indicate the course of medical opinion in respect of the limited problem.

In 1908, Mdlle. Lutrovnik, having in an able thesis¹³, formally rejected on rather inadequate grounds the notion that the Mongolian imbeciles represent morphologically or genealogically any extant human race, enquired if they may not indeed represent reversion to some simian type still persistent.

Failing however to establish any definite homologies between her cases of Mongolian imbecility and the chimpanzee, she did not formulate any definite proposition. But, about the same time, having in mind Haeckel's well-known scheme of human origins in which stress is laid upon the resemblances between the primitive



A YOUNG ORANG UTAN.
(Dr. Primrose's Specimen.)

PLATE VI. [face p. 28



Fig. 2, A JAPANESE PRIEST.



F.g. 1. AN ORANG-UTAN.

PLATE VII.

Mongolian races and the orang-utan (or Asiatic anthropoid ape), the present writer enquired whether the apparently pre-human characteristics of Mongolian imbeciles might not find homologies amongst the orang-utans. He was at once forcibly struck with the fact that, while the higher grades of Mongoloids seen in this country are certainly Mongolian, the lower grade Mongolian imbeciles and idiots are as undoubtedly orangoid in their homologies, (See 15, 16, 17, 18, 19). Although no one contradicted any of the observations brought forward, it was not found possible to obtain support, and the general feeling was apparently expressed by Prof. Comby of Paris, who has written so much on the subject.2 when he said with reference to my observations 'Il v a quelque chose de vrai dans ce rapprochement: nous devons le reconnaître. Mais il ne faudrait pas en tirer des conclusions au point de vue anthropologique et éthnologique.'

But, why should we not? Surely

it is not only legitimate but proper to seek 'anthropological' explanations of anthropological data that fall within our sphere of observation, and surely it is useful to enquire how far such data are reconcilable with anthropological and ethnological dogma 233.

Some encouragement was however offered when Dr. Shuttleworth (whose own contributions to the study of Mongolism have been so numerous and valuable) told me that Dr. Hunter, (now of The Coppice, Nottingham) had, some years ago, arrived at conclusions similar to my own. Dr. Hunter, who has never published his investigations, has told me that he has not pursued his enquiries; but he has generously sent me valuable notes for which I am greatly indebted.

Dr. Shuttleworth's own position in the matter is summed up in the dictum that Mongoloid imbeciles are 'unfinished children.' This they certainly are, but two points remain for elucidation. If, as is not the case, all unfinished 'Whites' were 'Mongoloid,' should we

not be compelled to reconsider Chambers' scheme of anthropogeny and to derive the 'White' race from the Yellow? Since, as is certainly the case, only some unfinished children, and only some unfinished children in certain race-groups, are Mongoloid, what explanation can be afforded for this particularity? Dr. Shuttleworth's dictum carries us a stage further than before, it is true, but does not dispose of the fundamental issues.

However, though Bourdillon is inclined to see in Mongolian idiocy a reversion to an even earlier stage of phylogeny than that of the appearance of the great anthropoid apes, 20 most text-books of Medicine completely ignore the important questions raised, and Apert, in his most recent paper 21 declares that the striking resemblance between Mongolian imbeciles and Chinese children is accidental and in no wise essential.

So the matter rests to-day: but, even though medical men working in their restricted sphere hold the homologies

to be 'accidental' and devoid of relation to the general scheme of things, anthropologists can hardly be content to ignore them. One eminent authority in the anthropological world, it is true, has declared the homologies I have observed to be 'superficial' and devoid of significance. But I have not yet succeeded in learning why any homology should a priori be dismissed as superficial, and what homologies should a priori be considered significant.

Recently however, Sera has asserted certain homologies between the Mongolian races and the Orangs to be so 'perfect' as to warrant us in affirming between these il più stretta legame filetico. 103 Now the characters that are homologous for the Mongolian races and the Orangs are obviously present in our native 'Mongoloids.' How, then, can they be devoid of significance and merely superficial?



A CHIMPANZEE



A GORILLA Proto es Me 3 A Alber

PART II

DESCRIPTIVE

It has been indicated that, as a result of the study of Mongolian imbecility, and of the Mongoloids of Great Britain and adjacent countries, homologies have been found to obtain between (1) the Mongolian division of the human race (2) the Orang-utan, or Asiatic ape, and (3) the classical Mongolian imbecile of Langdon-Down, as well as the higher-grade 'Mongoloids.'

The interest attaching to these homologies is enhanced by the fact that, incidentally to these observations, certain homologies have been found between (1) certain types of the 'White' groups of the human race (2) the Chimpanzee and (3) a kind of mentally defective individual, found amongst certain white races, who is said to suffer from Dementia Precox.

Furthermore, homologies of the same

order appear to obtain between (1) the Black, or Negro division of the human race (2) the Gorilla, or great African ape, and also (3) a type of idiot occasionally (though rarely) seen in Europe, and described by Langdon-Down as of the 'Ethiopic' variety.

In other words, in spite of convergence and miscegenation, three Types or Faces seem to emerge when we survey the whole field; and we see each of these Faces as borne by a Man, by an Ape, and by an Idiot.

Moreover, a still wider horizon opens before us when we realise that, during the later Palaeolithic period there existed, side by side in Europe, three human races—those of Cro-Magnon, of Chancelade, and of Grimaldia—which tended to approximate to certain primitive types of White, of Yellow, and of Black Man respectively.

The task, however, of instituting a comparative study is extremely difficult. We must, in the first place remember that, though as Braun has observed, Morphology has always to

decide as to the *possibility* of descent, an evertheless, in Hertwig's words, Homology is a mental concept, obtained by comparison, which retains its validity under all circumstances, whether the homology finds its explanation in common descent or in the common laws that rule organic development.

Therefore, our first task should be to study homologies, or to make comparison, without preoccupation as to the influence that the results will exert in certain circumstances upon our beliefs.

Next, we must not confine our studies to purely morphological details. Psychological or cultural homologies are at least as important, and physiological or functional homologies no less so. Let us remember how brilliantly Hamy's and Boyd Dawkins' assimilation of the Magdalenian and Eskimo cultures has been vindicated and supported by later research. (See ²⁶, ²⁷, ⁹, ⁹²).

In a real sense, however, this

extension of our field of observation increases our difficulties. What we know of prehistoric man comes only (1) from a study of his bones and (2) from such notions of his culture as we have been able to provide from study of his tools and of his art.

Concerning the three great apes we know much: their morphology has been abundantly studied and we are learning, from such observers as Köhler, 101 much about their psychology and their behaviour.

But, although the cultures of the great divisions of mankind are intensively studied, and though there is a vast accumulation of data concerning the bones of various races, yet is there an extraordinary lacuna in our morphological equipment that makes, at certain steps of any enquiry, avoidance of a petitio principii twice difficult.

Our full anatomical knowledge of Man is almost entirely based upon information obtained in European dissecting rooms from bodies called those of Europeans.' There is hardly any

complete account of the dissection of a body of a pure and 'typical' Yellow man, or of any such account of a pure and 'typical' Black man. On the other hand, the many variations recorded as noted when examining bodies of 'Europeans,' while correlated, it is true, with 'variations' known to occur normally in this or other race of man or ape, are never correlated with the individual type of the person dissected. All is governed by the idea that the subject is a 'typical' White man. And this is just the question at issue. For instance, in some standard text-books it is stated that a certain 'variation' has been found in a certain percentage of cases—at St. Petersburg! This variation is very rare in London, except amongst 'Mongoloids' but is 'normal' amongst Orang-utans. But should we not be told whether the St. Petersburg subjects, in whom this variation was so frequently found, were not really semi-Mongols, as are so many 'Russians,'?

Again, and it is a singular fact, no

complete dissection, save one, of a congenital imbecile, appears to have been made. The exception is that of one made by Testut.²⁵ Testut noted in his subject very many particularities of absolutely simian characters, and a comparison with Primrose's fine account of an orang-utan³ leads to the belief that Testut's imbecile was probably orangoid or Mongoloid. Unfortunately, Testut gives no clear diagnosis of the clinical nature of the case he dissected. It may have been a 'Mongolian' imbecile: we know, however, nothing with certainty on the point.

For such reasons, then, any attempt to institute a complete series of purely anatomical homologies in respect of the types referred to is impossible at present. The 'anatomical' evidence, then, is here deferred, until after consideration of certain physiological and psychological similarities and resemblances. First, however, it is proposed to discuss two topics that have escaped the attention of most anthropologists: Posture and Hand-Markings.

POSTURE

The complex nature of the relation between form and function has been studied, in respect of a particular Posture, by Sir Havelock Charles²⁹ and his work is of great importance.

While differences of opinion in respect of individual cases may be admitted, it is difficult to dispute that the habitual assumption, from infancy, of a particular posture, must be expressive of characters not merely inborn but inbred: that is, of engrams. For an habitual posture implies, not merely the habitual disposition of the limbs in a peculiar way, but a concatenation of structural arrangements of bones, of muscles, of ligaments, of integuments, and the like, co-ordinated and directed by nervous adjustments; based upon a particular pattern of cerebral form and organization and correlated with a particular pattern of psychological 'make-up.'

The kind of posture of chief importance in the present context is not

that which is implied when the 'upright posture' in progression is spoken of, but the kind of pose adopted by men and by apes during cessation of muscular movement, and correlated with a psychical attitude. Many years ago, Pouchet hinted that, in the study of racial peculiarities in matters of this kind, might one day be found the key to the solution of difficulties in respect of racial affinities and divergences.³¹

Now one fact appears beyond dispute. In respect of Posture, as just defined, the primary and secondary races of Mankind all fall into one or other of two groups: (i) that which naturally and habitually disposes the lower limbs in horizontal planes, and (ii) which naturally and habitually disposes them in vertical planes. The first group comprises the whole of the Mongolian division of humanity—the Yellow race: the second, all the non-Mongolian races-the Negroes and the 'Whites.' Members of all races appear sometimes to adopt sitting postures intermediate between these two primary ones. But



Fig. 1. THE BUDDHA POSITION (Bundhist Priest)



Fig. 2. THE BUDDHA POSITION. (Burmese Gentleman.)

[face p. 40.

PLATE X



Fig. 1. THF "NEGRO" POSITION | Younk Garilla !



Fig. 2 THE "BUDDHA" POSITION. (Young Orang.)

the fundamental distinction is as stated, although 'convergence' is obvious when secondary postures involving the use of a stool or chair are in question, and amongst the civilized races.

I. The Mongolian, Buddha, hieratic position, with the lower limbs arranged horizontally, is well indicated by the frontispiece, and by the pictures on Plates X and XI. The sacrum forms the apex of a triangle of which the thighs are the sides. The base is formed by the legs superimposed, with the soles turned upwards. The spine is vertical, and 'splinted' by one upper limb, of which the hand is placed on the homolateral thigh. The other hand lies in the lap. Sometimes, in iconographic representations, one hand (usually the right) instead of resting on the thigh is raised, as in benediction. But, what is essential, is the disposition of the lower limbs

This disposition of the lower limbs, adopted naturally, primarily, and habitually by all races in the Mongolian division of humanity, is characteristic

of the Mongolian races of Central Asia, of the Chinese and allied races, of the Burmese, Siamese, and Malays, and, speaking generally, of the North and South American Indians, as well as of the Eskimo. It does not appear to be characteristically adopted by any race that is not truly Mongolian, in the broad sense, though a modification of it is employed characteristically by the semi-Mongolian Turks and by some other secondary peoples who, though not classed by orthodox ethnologists as Mongolian, have been recognised by many to exhibit facial and other peculiarities resembling those of the Mongolian division in general.

It is a position that is difficult of adoption by true Negroes and by most 'Whites,' although, as will be shewn, it can be and is naturally and habitually adopted by certain persons found amongst the 'White' races.

These persons are the Mongolian imbeciles and Mongoloids already spoken of. Many years ago, Dr. Langdon-Down remarked of the former



Fig. 2. A BOMBAY CHILD.
(Photo b) Dr. J. H Wilson.
PLATE XII



Fig. 2. A YOUNG GORILLA.

(Photo b. Mr. W. N. Allen)

[free p. 42.



Fig. 1. THE "NEGRO" POSITION. (Fajelu Man and Woman)



Fig. 2. THE "NEGRO" POSITION. (Photo by Mr. W. N. Allen.)

PLATE XIII

that they loved to sit 'cross-legged like a Turk' and the observation has been frequently repeated. This is however only a partial indication of the truth, for the really 'typical' Mongolian imbeciles, when told to sit down, place themselves instinctively in the classical 'Buddha' position, as does the little Londoner represented on the frontispiece. And in every day life, if a parcel of school-girls or boys in bathing costume be told to squat on the beach as they like, those with Mongolian traits, and those only, will be noticed to adopt the true 'Buddha' position.

It is even more singular that the Mongolian imbeciles should not only love to sit like a Buddha but to sway the head, backwards and forwards, like a porcelain mandarin, whilst I have seen a baby Mongolian idiot prostrate himself in his cot, for hours at a time, doing the Kow-Tow. Now, when an English idiot of Mongolian physique performs in his cot the symbolic act of humiliation practised by the Chinese race, and does it *instinctively and*

persistently, it is idle to declare airily that no real homology is involved!

More remarkable still is the fact that orang-utans alone amongst apes naturally place themselves in the Buddha or hieratic position, and none other. That is to say, they dispose of their lower limbs in an horizontal plane and not vertically. (Pl. XI).

We arrive then at this conclusion. There is a primary posture that is naturally, habitually, and instinctively adopted by one race, and one race only, amongst the great anthropoid apes, by one division only of the human family, and by one group of imbeciles born amongst another division but conforming morphologically to the first. This is the Buddha position, natural to the orang-utan, to the racial Mongol, and to our indigenous Mongolian imbeciles and Mongoloids.

II. The second primary, habitual, and natural position—that adopted by all primary but non-Mongolian human races—has already been defined as involving a vertical disposition



(Native from Kikiyu.)



F £. 2 PRIMITIVE "WHITE" POSITION.
(Australian Native

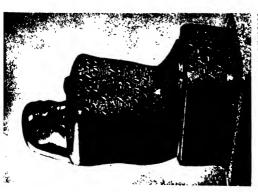
tace p 44.



FAR YOUNG GORILLA.

(Photo b) Mr W N Allen |

(face p. 45.



E.A. I. STATUE OF ECYPTIAN OFFICIAL.

PLATE XV

of the lower limbs. The knees are brought together under the chin, and the spine is curved with the concavity forwards. The arms are variously arranged; sometimes they are extended and rest on the knees; sometimes they clasp around the knees. But, the leg disposition is of the essence.

Now, of this arrangement there are two variants. In the one (most commonly adopted by the Negroes, or Black division of humanity) the ischial tuberosities rest on the ground; and the back is then sometimes supported by a tree trunk or a fence. In the other (that commonly adopted by primitive 'White' races, such as certain Polynesians; by Egyptians, and by natives of India) the buttocks do not rest upon the ground and the individual is said to squat on his heels or on his hams.

Two points now arise. Gorillas and Chimpanzees do not dispose of their lower limbs horizontally, as do Mongols, Mongolian imbeciles, and Orangs, but vertically as do Negroes and primitive

'Whites.' Moreover, the Gorilla more commonly adopts the Negro, and the Chimpanzee what may be called the Semitic or Aryan variant,

Now, frequent amongst the 'White' races generally, there is a mental disorder, associated with certain marked physical characteristics, that occupies a middle place between acquired insanity and congenital imbecility, and is known as Dementia Precox. The persons so afflicted, if deprived chairs, or permitted to squat upon the ground, squat, not as Orangs or Mongols, but as Chimpanzees. (Plates XVI, XVII.)

But, if compelled to sit upon benches or chairs, the chimpanzee attitude becomes at once converted into what Dr. Steen 32 has called the 'Ancient Egyptian attitude.' It is interesting to note that, as a rule, in the apes and in the dements, the arm arrangement. (as sometimes in the Egyptian statues) is one of rigid symmetry. Yet, when the Egyptian artists desired to convey the idea of Power or Intelligence, an asymmetrical disposition was featured



R . A YOUNG CHIMPANZEE.



F g. 2 A CASE OF DEMENTIA PRECOX

[face p 46.



FIR. 2. A CASE OF DEMENTIA PRECOX



FIG. 1. AN INDIAN FAKIR.

PLATE XVII.

that is seen to-day when a King is represented on a Throne holding a sceptre in a semi-pronated right hand and an orb in a fully supinated left hand. Symmetry of disposition in respect of the arms, we must recognise as correlated with an arrest of mental activity. We see it in Death, in Idiocy, in Senility and amongst the Apes.

To sum up, then, we see that Mankind (in respect of primary and habitual posture) falls originally into two groups: the Mongolian and the non-Mongolian.

One of the two postures, the non-Mongolian, is adopted by the Chimpanzoid and Gorilloid anthropoid apes, and by persons amongst the White races afflicted by dementia precox: the other, or Mongolian, is adopted by the Mongolian imbeciles found amongst the 'White' races and by the Orangutan, or 'Mongolian' ape.

Here for the moment the point, with all its implications, must be left. But proof is not lacking of the homology in respect of skeletal, muscular, and nervous organisation and structure,

between those classes, of men, of apes and of idiots, by which like postures are habitually, naturally, and of choice adopted. And anatomical adaptations to one of these postures have, by Charles, been shewn to be already present in unborn children.²⁹

HAND-MARKINGS AND GESTURES

The hands of Mongolian imbeciles, especially in youth, are very characteristic, and quite different from the long. lean, flat, and chimpanzoid hands of a case of dementia precox.83 The palm is square and plump, with the palmar eminences (at least during the first months of life) like the palm pads of a young monkey. The fingers are blunt-ended, the thumbs are short. the index is reduced, and the little finger is short and curved. This is indeed the hand of the young racial Mongol and is singularly suggestive of the hand-prints on the cave walls at Gargas. It is, moreover, like the



FIX. 1. DEMENTIA PRECOX.

(Photo by Dr. Steen.)



F.¢ 2 EGYPTIAN STATUES

(face p. 48.



AGED SOUTH AUSTRIAN PEASANTS.

PLATE XIX

hand of all young racial Mongols, the hand of the young Orang—though enormously shortened—rather than the hand of the Chimpanzee (which corresponds to the long hand of a Bengalee or Egyptian) or the thick webbed hand of the Gorilla, which has many points of likeness to that of the true Negro. The digital formula, like that for the Mongolian races in general is 3>4>2>5>1.

The peculiar interest, however, of the hands of Mongolian imbeciles lies in this, that the greater number, as also many of the hands of 'Mongoloid' persons, display—sometimes on the left palm, sometimes on the right—a peculiar arrangement of lines first noted by Dr. Reginald Langdon-Down and later described by the present writer. (See 16, 17, 19, 69).

That the point may be understood, it is necessary to refer to the principal markings to be seen on the palm of a 'normal' member of one of the higher races. Disregarding the secondary and tertiary lines that develop

during life, there are three well-marked lines that may here be called 'primary,' and that are already present, towards the end of foetal life, in the well-developed offspring of normal parents.

These lines persist during life with little modification. The first (or line of life, in the phraseology of the palmist) skirts the ball of the thumb. The better developed the thumb muscles, the better marked the line.

The second (or line of heart) commences between the roots of the index and middle fingers and runs to the ulnar border of the palm. It is brought out well if the index finger be fully extended and the three others partly flexed.

The third (or line of head) is nearer the wrist than is the line of heart. It commences somewhere on or near the hypothenar eminence and, crossing the palm, terminates on the radial border, between the roots of the thumb and index, there coalescing with the end of the 'line of life.'



HAND PRINT (LEFT) OF A WELL DEVELOPED ENGLISH BOY AGED 11

PLATE XX | face p 50



FIR. 1. HAND-PRINT OF "MONGOLIAN"
IMBECILE.

FIR D. HAND PRINT OF A TONKINESE SALLOR.

[face p. 51.

PLATE XX1

If the hand be placed in the position of the hand of the Angel in Leonardo's Virgin of the Rocks of Paris, the relation of these lines to the execution of a gesture that is exclusively human, and characteristically elevated, will be at once evident. (Plate XXVIII).

Certain other lines, running up from the wrist on towards the fingers are sometimes seen, but are not essentially 'human.' Their functional adaptation is to that pose so necessary to accoucheurs, conjurers, and pickpockets, when it is desired to pass the hand through a small circular orifice.

Each of these three primary, as well as these secondary, lines, is therefore definitely correlated with function; they appear in early life in anticipation of functional activity, and indicate a certain kind of mental development and cerebral organisation.

But, the Mongolian imbecile commonly, and the sporadic 'Mongoloid' not infrequently, on one or either hand or on both, display, instead of a distinct line of life and a distinct line

of head, one transverse line only. And the functional correlation of this single line is with the gesture of the ill-bred lout who holds his knife and fork transversely across the palms, and not as well-trained children who, in holding either tool, differentiate the index and in less degree, the middle finger from their fellows.

We may indeed imagine that the single transverse palm line of the Mongolian imbecile represents a primitive feature, and that the differentiation of the lines we call those of head and of heart from this single line—as a key-ring is split—has come about by specialisation in the use of the fingers. To some extent this is so; and such a line is certainly normal for some monkeys (See **, ***). But not for all, and, this is singular, amongst the great anthropoid apes, the 'Mongolian' line is only found in one:—the Orang-utan.

And, furthermore, although it cannot be said that this 'Mongolian' or 'Orangoid' line is generally found in



FIG. 1 HAND OF A RHESUS MONKEY.

Fig. 2. HAND OF AN ORANG.

PLATE XXIII

the mixed and higher Mongolian races such as the Japanese—at any rate with great frequency—yet I can affirm, from personal observation, that it is extremely common, in either its simple form or in some modification thereof. amongst low caste individuals from Annam, Indo-China, and so on. We arrive then at the conclusion that a special, simplified type of hand-marking is shared by Mongolian imbeciles, by European 'Mongoloids,' and by orangutans, and is not uncommon amongst certain low grade racial Mongols. Moreover, this type of hand-marking is definitely shewn in many of, though not in all, the Chinese and Japanese representations of Buddha. In any case, Chinese and Japanese artists are well aware of this simple type and that it has significance, though they are reticent when interrogated. I have only twice seen this single transverse line delineated in England: once in Beamish's Psychonomy of the Hand, where it is said to have been seen on the hand of an idiot at Cork; once in

a collection by Cheiro, who told me he had seen it on the hand of a doctor of Chicago who was executed for murder.

Now, so far, I have never seen this particular type of palm-marking on the hand of a Negro, or of a Hindu; I have once or twice seen it on the hands of Jews, but they came from the Baltic and admitted Tartar ancestors; and I have never seen it on the hand of an English man or woman who had not some definite smack of Mongolism or at least some simian characteristic, such as a fissured tongue or the like.

Again, I have not seen it, or known of it having been seen, on the hand of any gorilla or chimpanzee. The hand of the gorilla seems often to display two completely transverse palmar lines, such as may be seen on the hands of many Negroes and some people in this country of negroid physique.

The hand of the chimpanzee, however, is characterised, not by the single primary transverse line, but by a set of lines in the long axis of the

limb, branching V-fashion from the wrist. Such lines are very common on the chimpanzoid hand of the Dementia Precox patient, as well as on those of certain types of neurotic 'artists.' (See *, 67, 69, 71).

Finally, correlation between the type of palmar marking and that of habitual posture is very strong. So that we find the Mongolian imbecile, the European 'Mongoloid,' the racial Mongol, and the Orang, displaying the same palm-lines and adopting the same posture, while different types of palmar marking, and different kinds of posture are shared (a) by the Negro, the Gorilla, and the 'Negroid' and (b) by the 'White,' the Chimpanzee, the case of Dementia Precox, and certain neurotics respectively.

Posture and Hand-markings have been here discussed at length because they have not generally received serious consideration: yet they are interesting and important, and everyone may contribute

to their elucidation. The writer has received much valuable information from many observers, and will appreciate corroboration or refutation of his observations from those who are able to help in either direction.

It is however proposed now to describe, as simply as may be, some other characteristics of Mongolian imbeciles, indicating the homologies which obtain between these imbeciles, racial Mongols, and orangs, and, incidentally between the 'White' races, the chimpanzees and cases of Dementia Precox on the one hand and between the Negro and the gorilla on the other.

There is an extraordinary constancy to type in the psychology and conduct of Mongolian imbeciles, best observed those between four or five and tentwelve years of age. The children are placid, docile, and gentle; yet bright and happy. They are not nasty and do not masturbate. Herein they are orangoid rather than chimpanzoid. They are as imitative and as fond of make-believe as are the little Eskimo²⁸ and will, for hours at a time, pretend that they are students or parsons. But the play-acting element is obvious, and, as Hunter has said, their laughter when 'acting' is a sham, unaccompanied by evident emotional feeling. Their letter-writing also is as devoid of real

[56]

attempt as is letter-writing on the stage, and it is worth noting how many high-grade Mongoloids are to be found amongst our successful comedians!

The imbeciles have no capacity for grasping abstract notions of even an elementary order, and it is particularly noticeable that their intellectual processes. so far as dependent on fine visual perceptions, are specially defective. One is reminded of the Chinese defender of a fortress who feels secure, behind the painted gun or canvas battlement that he relies upon to frighten his assailants, But their hearing is as acute as is said to be that of the visually defective orangs; they love music and rhythmic sounds and will sway and nod in unison therewith like a porcelain Mandarin. The facial expression, during inactivity, is calm and passive like that of a sculptured Buddha, and we remember how Huxley wrote of the 'sad. Socratic visage' of the orang. aptly compared by Delisle to that 'un vieux bonze,' Shuttleworth has laid stress upon the alleged freedom of the Mongolian imbecile from the foreheadwrinkling (see 14, 76) so marked in Chimpanzee and the dement, while Primrose* declares that the orang has no power of producing such wrinkles. Mongolian imbeciles speak late, and it is remarkable that they alter many consonantal sounds,

saying 'lellow' for 'yellow' and so forth, like a stage Chinaman, 32 whilst they never construct long sentences. They tend in fact to employ only monosyllabic and asyntactic forms of speech.

The vocalisation is short and jerky, and even late in life the voice retains a guttural quality, whilst in early days there is a very simian habit of emitting strange snoring, snuffly, whirring, and hooting sounds.

The imbeciles have not such full independent control of the respiratory, masticatory, and swallowing processes as have children whose bulbar mechanisms are well developed. Wheezy and croupy like the orang in the London Zoo, they require for easy breathing in cold and foggy weather the steam kettle and aromatic vapours that form the hospital succedaneum for the tropical jungle—at any rate, during their infancy. Later, they 'gag' when attempt is made to inspect the fauces; and are asthmatic.

They walk late, and badly; bending, swaying, and not placing the foot flat on the ground, whilst sometimes a quadrupedal method of progression is preferred.²⁰

Never hypertonic so far as the muscles are concerned, their immobility when scated differs from the katatonia of many dements; rarely if ever epileptic, they do not indulge in the symmetrical, almost convulsive, clowning gambols of the

chimpanzee. But, by reason of their very extreme hypotonicity and loose limbedness, they can achieve, like the orang, marvellous feats of contortion.

A very important point now arises. Vogt, from a physiological point of view, has classified Mongolian imbeciles as either erethetic or lymphatic.34 In other words, they are either hyperthyroidal or hypothyroidal. Now, just as the vivacity of the young orang gives place in age to a heavy, dull or 'myxoedematous' condition, so does the erethism of the young imbecile not infrequently give place to a myxoedematous condition in age, Many of the myxoedematous old women of our hospitals were, when young, pretty little girls of the Mongoloid type. And Keith affirms strongly the 'dysthyroidism' of the orang.35

All hypothyroidal creatures (orangs and imbeciles alike) have poor circulations and low blood-pressure, feel the cold, and shew a low temperature record. The Mongolian imbeciles suffer from such ailments as are natural to their 'organinferiority' in respect of the respiratory system laryngeal, bronchial and pulmonary catarrhs, spasms and inflammations. They often succumb to rapid tuberculosis, In the imbecile, as in the ape, there is a poor lymphatic defence against infection. The younger imbeciles often die during

attacks of 'thymic asthma' or from 'status lymphaticus.' In asylums, most cases die young: those who survive generally lose their special characters, apparently 'growing out' of some of their atavistic peculiarities.

Turning now to some anatomical characters, we note that the imbeciles are generally small: the height of males above the age of 16 is given as 60, and of females 55 inches (Hunter). Herein the resemblance is towards the Japanese and Lapponic Mongols as well as to the Eskimo.

The skin, though sometimes smooth and soft, is generally dry, scaly, scurfy, dusty or 'furfuraceous'—a characteristic shared with Tartars and orangs: in extreme cases there is xerodermia. The complexion, often blond, is generally described as sallow or earthy: it is sometimes definitely yellow or even green. Dr. Shuttleworth has drawn attention to what he considers important: a flush on the malar eminences. This is racial for Eskimo²⁸ and for 'Tartars.'

The hair, generally light in the imbeciles, is often dark, or even black in the Mongoloids. Some are red-haired, as are most orangs. The imbeciles and Micawbers are soon bald on the scalp, where the hair—as it was in Job Trotter, another Mongoloid is lank and straggly. The beard,

amongst the imbeciles and Mongoloids as

amongst the Mongolian races.

I have found the hair from a red imbecile to resemble exactly, on section, the hair from a red orang and the hair of a red-haired Chinaman, figured by Fritsch.³⁶ But sections are difficult to cut; a fact which in part explains the conflicting statements made concerning the hair of 'Mongols' and 'Caucasians.'³⁷ Lately, however, the hair of the orang has been shewn to resemble more closely that of a 'European' than that of a 'Negro.'³⁸

With the imbeciles, as with the orangs, lanugo persists: the face of the imbeciles is often covered with a soft downy growth.

the imbeciles, pigmentation generally deficient, but the blue sacral and groin patches which are called 'taches mongoliennes' may be seen, though markedly in only very young imbeciles. Comby appears somewhat incredulous as to the occurrence of these 'taches' in the imbeciles39 but it is noteworthy Consiglio has met with them amongst North Italians and makes the suggestion that their occurrence is a legacy left by Mongolian slaves of the Venetian Republic! The truth seems to be, however, that these 'taches'-first described by Baelz, who saw them on his own child by a Japanese mother to are not peculiar to the Mongolian races. They have been

seen on Burmese, it is true43 but also on Negroes, by Brennemann⁴¹ and by Ferreira42 whilst others have seen them on Jews and Tunisian Arabs44 and many have noticed them in South Americans of one race or another. Comby's suggestion that, in the absence of these blue spots we must not impute Mongolian homologies to the 'Mongolian' imbeciles, then falls to the ground. Bruch is probably right when he observes44 that 'c'est que les enfants porteurs de la tache ne sont jamais blond ou roux,' and, as has been said the imbecile is usually blond from pigment deficiency. The histology of these spots has been studied by Hopf⁶ and it is worth remembering that, while the gorilla has black, the orang has blue pigment in his skin, and the chimpanzee, though presenting fair or white areas—as on the face is also black skinned, like the gorilla.

The ear of the orang—called by Keith, degenerate—is sometimes said to be small and beautifully formed. It is lobeless, with a round, rolled border and, while sometimes flat to the head, often projects as to its upper half. In all these respects it corresponds to the ear of the imbeciles, and, more or less, to the ear of racial Mongols, differing markedly from the large and projecting ear of gorillas, negroes, chimpanzees, and dements of the

'precox' type. In foetal orangs, the Darwinian tubercle is marked, as it is in low grade Mongolian imbeciles.

The higher grade Mongoloids have usually, or often, an adherent lobe, and an ear of Bean's 'modified primitive type.'46

Generally speaking, in men, as in apes. the lobeless ear goes with a short head and poorly developed, or rather unobtrusive mastoid processes, while the lobed ear marks the long-headed men and apes. In this connection it is worth noting that the strongly lobed car of the Chinese pictures and images is really an artistic fiction (like the Greek nose and forehead) representing the morphological aspirations of a race. Apparently the Chinese (who are very sensitive and reticent in respect of what is theromorphic in their race) early recognised that the lobeless ear and the single hand-line were traits of racial inferiority. Thus, the wearing of heavy car-rings by them is explicable as an attempt to promote the development of the ear lobe.

The stiff, wiry eyebrows of the Mongolian imbecile are not horizontal, with an outward droop, as in the highest Indo-Europeans, but are arched, or peaked, as amongst racial Mongols, and often broken in outline, sometimes intermingling on the root of the nose. But, in the imbeciles, the whole visual tract, from external eye

to cortex is retrograde, and the visual sense- as in the orangs-is feeble and in marked contrast to the development of auditory apparatus and faculty. Again, many of the imbeciles are said to be colour-blind. They certainly do not appreciate acutely vivid colours, as do little negroes, and it is worth noticing that there appears to be a very clear distinction between the colour sense of the Yellow and of the Black races. In Siberia whole tribes are said to have no colour sense --perhaps because they do not see as we do- but I have failed to find an account of colour-blindness in a Negro, while most colour-blind Europeans that I have seen have been persons of a Mongoloid type.

So far as the external eye is concerned, the Mongolian character thereof is, amongst the imbeciles, as marked as it is in the orangs only amongst the great apes.¹⁰³

Now the characteristic of the racial Mongolian eye is not, as sometimes suggested, the presence of an epicanthus, for there is a *vertical* epicanthic fold in Negroes and in many Whites (as well as in gorillas and chimpanzees) that is in no wise suggestive of Mongolism. Nor does it consist in mere obliquity of the long diameters of the palpebral fissures, for this only occurs amongst certain Mongolian races. The characteristic of the Mongolian eye, as shewn by King²⁹ and by

Metchnikoff⁴⁷ is a sort of oblique fold of loose skin just above the upper lid. most marked at the inner angle, impinging on the evelashes, and giving, when the pupil is turned towards the nose, the appearance to the eye, as the Japanese say, of 'a little fish,'48 It is the irritation of this fold by the stiff eyelashes that gives the bleary look to racial Mongols and the imbeciles, as well as to elderly orangs. When, at puberty, or later, in a Mongolian imbecile, the nose grows out, and the frontal sinuses expand, this fold disappears. But the line of the lower lid remains during life, in racial Mongols and in the imbeciles, straight, with or without obliquity, and is not curved as in Indo-Europeans and in Negroes. The most ' typical ' Mongolian eyes are seen amongst the young female imbeciles and racials: in old people a baggy puffiness fills out the fold of King and Metchnikoff. So too, in the orangs.

The nose of the Mongolian imbecile is, typically, like that of the more primitive Mongolian races, concave or flat in profile, with an expanded alar base, and peculiar nares.

But, after puberty, and especially in high grade cases, it may become convex, or even 'beaky' as amongst Eskimo²⁸ Amerindians and Bornean Malays.⁴⁹

The mouth of the imbecile is peculiar.

As seen from the side, often enough it exaggerates the 'funnel-shape' of the racial Mongol. But, in other cases, the lower lip protrudes, as in the Hapsburgs (who derive this feature from a Mongolian ancestress), as in young Eskimo, and in the orang.

Fisk has described how the orang pushes forward his lower lip to catch the raindrops, and makes a receptacle of the pouch thus formed.⁵¹ Shuttleworth⁷⁵ speaks of the 'pursed up' lower lip of the imbecile; but sometimes both lips are extruded trumpet-fashion, while the fissured markings of the red edges are noticeable, even in high-grade 'Mongoloids.'

The tongue is large, beefy, rough, warty, and pithecoid. Indeed, not so much is the tongue large for the jaws as are the humanoid jaws small for the pithecoid tongue. An important point is that the circumvallate papillae seem arranged V-wise, as in the orang and most Europeans, and not in the T-fashion seen often in the gorilla, the chimpanzee, and sometimes in human beings. The foliated organ, which in the orang is marked by twelve 'lames' according to Deniker⁵², is generally 'large.'⁵²

The most characteristic feature of the tongue is however the fissuring, not always present at birth, and usually developing at about four or five years of age.

Several patterns of fissuring have been described in Mongolian and other backward children⁵⁴ but what I have called the 'gravy-dish' arrangement-a central groove with lateral branches—is the most typical' of Mongolism. Thompson has suggested that this fissuring is due to the sucking habits of the imbecile55 but does not explain why Mongoloids who are not tongue-suckers33 should exhibit it. Moreover, I have observed the presence of this fissuring on the tongues of many racial Mongols, That the orang alone amongst the great apes -1 am not sure about the gibbon-has a fissured tongue, is mentioned by any zoologist. But presence in one London orang was inferred, a priori, and was plainly demonstrated afterwards by me. However, we may agree with Thompson that there is some connection between the habit of tonguesucking and the fissuring, when we remember what Roux has written 30 and that the orang has been described as having peculiar lip-movements when taking foods and as slowly squashing durian fruit in his mouth, with the juice trickling out at the corners, and so forth.58 The fissured tongue of the imbecile with its gravy-dish arrangement, then, seems reminiscent of this irrigation system in the mouth of the orang: so perhaps the 'tongue-sucking' is also atavistic.

The orang alone amongst the great apes has no uvula, or only a very small one though it requires as much patience to demonstrate this on the living ape as it does to look in the throat of a Mongolian imbecile. Yet the chimpanzee will open his mouth and shew his tongue freely. Some Mongolian imbeciles have no uvula: Comby finds 'brièveté de la luette' frequent in his cases.2

The palate is distinctly simian in the imbeciles. Unless rickets is present, it is flat, with parallel alveolar ridges: that is, when the bones alone are considered. But, clinically, it often appears narrow and pointed in coronal section by reason of the lymphoid pads, noted by Testut in certain Europeansss, -an ape-like, if not specially orangoid feature. The palatal ridges are strongly marked, and the torus palatinus (which Godlee has shewn to be most common in Eskimo, Lapps and Finns⁵⁸) is pretty constant, according to Hunter.

Speaking generally, the teeth, both permanent and deciduous, are retrograde Both Hunter and myself and simian. have noted long canines, a diastema. extra cusps on the molars, crenation of upper molar surfaces, dwarfing or exaggeration of the lower lateral and upper central incisors, caniniform first premolars and other irregularities. Some of these

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characters are orangoid, others more primitive still.

Most of the details so far mentioned may be easily verified without skill in anatomy; most of those now to be spoken of require some special knowledge for their appreciation. Unfortunately, no *skeleton* of a Mongolian imbecile has been investigated by a trained anatomist. However, certain facts may be set out.

The head of a Mongolian imbecile is usually very short, and flattened posteriorly. Thus, the skull resembles at once that of an orang and of a 'typical' racial Mongol, since the orang is the brachycephalic ape, and the extreme of human brachycephaly is met with amongst the Mongolian races. But, about seven per cent, of the imbeciles are dolicocephalic having a head form like that of the Eskimo ---the dolicocephalic Mongolian race and the man of Chancelade. According to Hunter, of 32 imbeciles two had cephalic indices between 70 and 74.9, and six between 75 and 79.9; fifteen between 80 and 84.9, and nine between 85 and 89.9. According to the same observer, the average circumference of the heads of the 32 imbeciles was, for those between 5 and 8 years of age, 18.7 inches, while between the ages of 9 and 11, 12 and 14, and 15 and upwards, the figures were 19, 19,7, and 19.84 respectively. Thus, the average

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'Mongolian' head appears to be about two inches less in circumference than the average 'normal' head, in the same age group. The average head of a female Mongolian imbecile is from a quarter to a half inch less in circumference than that of a male.

Many high-grade Mongoloids (like Mr. Micawber) present an egg-shaped cranial vault that is very orangoid: others, an horizontal groove around the skull at the level where rests the hat-brim. groove is seen in the skulls of many mesaticephalic Chinese, as well Mongoloid Europeans, and, by Virchow is attributed to the growth of brain in a brachycephalic skull, the anterior fontanelle having remained open later than In such cases, the nose is often parrot-like, and the chin is weak, giving an easily recognised facial appearance that is quite striking. Speaking generally, however, the skulls of young Mongolian imbeciles and of most Mongoloids smooth, with poorly developed browridges and air-sinuses, as in most racial Mongols and orangs not striken in years. Further orangoid and Mongoloid homologies are (a) a lack of prominence of the (b) absence mastoid process perfection of the styloid process accentuation of the lambdoid with also sometimes of the sagittal crest, and (d)

parietal bosses. The orbits are megasemic and oblique: the flattened nose rises between them. The naso-pharyngeal vault is strongly contracted from front to back, while, digitally, the arch of the vomer is plainly felt. The face is proportionately large, and, in adult Mongoloids, there is often a 'muzzle' character about the mouth and jowl, with lack of differentiation of the sub-nasal groove on the upper lip that gives beauty to the human face in well-developed persons. Sometimes prognathism is marked.

The cervical spine, as is shewn by the carriage of the head, projects anteriorly, while the straightness of the spine as a whole is again Mongoloid and orangoid.

has lately been shewn sacralization of the twenty-fourth vertebra. so common in the orang, is frequent amongst the racial Mongols, and this character is not infrequent amongst Mongoloids who complain of lumbar and sacral pains. In such I have several times diagnosed the condition, confidently, on the ground of the association of neurosis with Mongolian facies. diagnosis has been verified graphically afterwards. The orangoid sacralization appears to be correlated with adaptation to the Buddha, or hieratic posture: it certainly does not obtain amongst the gorillas, chimpanzees and

typically gorilloid or chimpanzoid human beings, with the same frequency.

The 'pathological' and imperfect sacralisation met with amongst the Mongoloids appears to be an expression of uncertainty in development amongst those of mixed heredity. In Butler's way of thinking, the developing embryo is uncertain which line to take, and so falters.

The clavicle of the Mongolian imbecile is long and straight, while Hunter has noticed the simian scapula with its weak acromion, and the whole thorax is apelike. The sternum of the orang ossifies peculiarly, in a manner noted sometimes amongst Europeans, but I have not had the opportunity of knowing that this variation is peculiar to Mongoloids and Mongolian imbeciles.

Now, while the arms of the imbeciles are generally short, as are those of the achondroplastic Lapponic Mongols, and those of Mongols generally, as well as of certain Welshmen, sometimes they are long, as also in the case of the 'vieux Tatar.'

It is well known of course, that the arms of the orang are very long, even for an ape, but this is common to orangs, Mongols, imbeciles of the Mongolian type, and Mongoloids alike: namely, that the radio-humeral index is high. In one imbecile, Hunter found it to be 82.15. Now, according to Keith, the long arm of the orang is

a secondary and degenerative feature, while the short arm of most Mongolian imbeciles and of most Mongolian races appears to be a manifestation of the unit-character which, in its pathological expression, is called achondroplasia. And while Virchow spoke of the Lapps as a race of achondroplastics, Keith has insisted on the achondroplastic features in the skull of the orang.

The hand of the Mongolian imbecile has been already commented on, but, while it is definitely Mongolian, there is some reason to believe that the persistence during life of the os centrale, noted by Gruber and others in some Europeans** and which is a definitely orangoid peculiarity, is met with only in those Europeans of Mongoloid type. Certainly, in all Mongolian imbeciles the bones of the carpus seem to ossify irregularly. (See 1, 2). Here again the embryo or infant seems to display Butlerian indecision, as also in shaping the pelvis, which partakes of an orangoid (or Naegele) character associated with sacral and lumbar irregularities, while the tun-like belly sinks between the high and narrow iliac bones. (See 62).

In the Mongolian imbeciles there is usually a wide angle between the neck and shaft of the slender and orangoid femur: a character definitely correlated with the horizontal disposition of the lower limbs

in sitting, and one certainly missing from the gorilloid femur of the Negro, and from that of the chimpanzee, or Punjabi, for Moreover, the example. acetabulum partakes of the orangoid character, and I have found in an imbecile absence of the ligamentum teres at least once, and weakness of the same structure several times. Again, let it be noted that absence of the ligamentum teres and abnormalities in the region of the acetabulum, etc., remarkable variations or deformities amongst Europeans, do seem to occur particularly amongst those individuals or races which have some smack of Mongolism. And it is very interesting to read that, according to Le Damany, congenital luxation of the hip is common amongst the Bretons. 104 This is precisely what is to be expected if the notions presently to be set out are well-founded, for amongst the Bretons Mongolian characters are frequent easily explicable. Another point interest is that Mr. Dudley Buxton has told me that he has thought to recognise the orangoid type of femur in certain Mediterranean skeletons. In the imbeciles. as in the racial Mongols, and this time, the orangs, the lower limbs are relatively short, and Hunter has found the and humero - femoral ' definitely simian.' The foot is characterised by a deep cleft of separation between

the very opposable great and second toes, and by a deep line that indicates a prolongation of this cleft ancestrally. A very important point is that, in the Mongolian imbeciles, the character of the plantar reflexes confirms abundantly what Babinski has suggested in respect of the phylogenetic significance of certain reflexes occurring under pathological conditions. In a word: the defensive and offensive character of these reflexes is obvious and marked.

In the imbeciles, the foot, as in the orangs, when not disposed of in the Buddha position, hangs in the position of equino-varus, until, with growth, planus develops. It is usual to say that imbeciles are club-footed, thereby obscuring a point of great interest, not however know definitely that orangoid absence of the peroneus tertius and splitting of the tibialis anticus are Mongolian features, but I suspect as much. The muscles, though lax, are fairly well developed, but the rump is simian rather than that of Epstein's Venus, and the calves are flattish. In walking, imbeciles appear, like the orang, knockkneed, rather than bandy like the gorilla and chimpanzee.

To turn to the morphology of certain internal organs, while I have never seen the larynx of a Mongolian imbecde or

Mongoloid to be of the negroid type described by Gibb⁷² I have often found them of the orangoid type figured by Duckworth.⁵⁰ What is the larynx of a racial Mongol? In the imbeciles, the ventricles of Morgagni seem to run upwards, or horizontally, and not downwards. (See ⁵⁸)

As in the orangs, so in the imbeciles, imperfect differentiation of the lobes of the lungs (and particularly of the upper right lobe) is very common, and this organ-inferiority' has a functional cor-

relation already spoken of,

The foramen ovale of the heart is patent in about 20% of the imbeciles, but accounts of the patency of this structure in the orang conflict the one with the other, Certainly, in the orang and in the imbecile variations in the origins of the great vessels are common. Dr. Beresford has pointed out to me what is true, that the lunulae of the semilunar valves are, in the imbecile, generally fenestrated, but I do not know if this is theromorphic, or not, The stomach and duodenum are poorly differentiated: this is orangoid. Again. abnormalities in the duodenum are not uncommon in the imbeciles, and Meckel's diverticulum is not infrequently present. This structure appears to be rather more common amongst the Mongolian races than elsewhere and recently, I ventured to predicate a persistent Meckel's diver-

ticulum in a neurotic woman presenting definitely Mongolian features: a fissured tongue, etc. The diverticulum was found by the surgeon, who fixed the large and mobile caecum and removed the simian appendix at the same time. In the imbeciles the colon and caecum are large and mobile and the appendix is long.

The anus is protruding, as in the apes, with a stellate arrangement of the skin In young males the scrotum is hardly differentiated and the right testicle usually undescended. The female pudenda are small and infantile, like those of a Japanese woman, and, as in Mongoloid women generally, look forwards with an antemingent faculty, rather than backwards with retromingence. Prof. Köhler has shewn¹⁰¹ that congress in the orangs is not, as in chimpanzees and gorillas, dorsal in respect of the female, but ventral, Correlation between anatomical form and functional adaptation of these organs seems then to be in accordance with the opinion of Ovid:

"... Modos a corpore certos Sumite; non omnis una figura decet. Ouae facie praesignis erit, resupina

Quae facie praesignis erit, resupino - iaceto ;

Spectentur tergo, quis sua terga placent."

and some remarks of Sir William Lawrence. 4

Perhaps, too, some very profound issues in relation, not only to individual happiness in life, but to questions of social importance are herein concealed.

At any rate, the genital characters of the imbecile, the orang, and the racial Mongol are in marked contrast to those of the gorilla, chimpanzee, Negro, and case of Dementia Precox.

The male organ, even of the imbecile is that of the Mongol and the orang: small, stubby, and not in need of circumcision, while that of the chimpanzee, the Semite, and the dement, is usually long and pointed with an adherent prepuce, or at least a fully covered glans.

But, although the genital organs are relatively hypogenetic, and although in the female imbecile menstruation is absent or delayed, usually, it must not be inferred that Mongolism implies sterility. Hunter and I have noticed how often one or both parents of an imbecile of Mongolian type are themselves Mongoloid.

Varicosities of veins are notably frequent in adult life amongst the Mongoloids and imbeciles.

In general terms, the brain of the Mongolian imbecile, though not very small, is infantile or simian in its gross characters. The convolutions are simple, and the fine structure is primitive. Hunter found the average weight of the brains of

six imbeciles aged between eleven and fifteen to be 1064 grammes; Comby, without mentioning age, refers to weights

of 725 and 820 grammes.

There is a constant relative inferiority of the cerebellum, pons and medulla, these organs weighing usually about one half the normal. This inferiority, which we correlate with the head-form; with the laxity of the muscles; and with the poor organisation of the bulbar mechanisms; is definitely orangoid and opposed to what is found in microcephalic imbeciles. 24

The simplicity of the cerebral convolutions is less evident in the Rolandic area than elsewhere, but the annectant gyrus in the Rolandic fissure is sometimes uncovered74 while Hunter has noted persistence of the 'Affenspalte,' superficiality of the cuneate-limbic annectant gyrus, accentuation of the fissura rhinalis, certain characters of the uncus, and the 'orangoid' orbital depression of the frontal lobes. The second of these characters is, by Giacomini, stated to be of phylogenetic importance.25 Further information concerning the brains of these imbeciles has been given by Shuttleworth,75 Tredgold,76 Comby,2 and Waterston,77

Now, though extremely little is known concerning the brains of racial Mongols, in the account of three Chinese brains given by Schuster⁷⁸ there are some inter-

esting points. If we disregard the first of his series-an obviously deformed brain—it is clear that, in the other two, the occipital lobes were poorly developed, allowing the cerebellum to be seen between them.

This feature, which is characteristic of the brains of Mongolian imbeciles, has been repeatedly declared to distinguish the brain of the orang from that of the

other great apes.

Finally, it may be noted that the late Prof. Klaatsch¹⁰² --- whose views on the homologies between orangs and certain races of mankind will be presently referred to is said to have come to certain very important conclusions as a result of the study of Mongol brains. It is hoped that his notes will be published in due course.

Such is a brief sketch of what is known concerning the homologies between the Mongols in our midst, the racial Mongols, and the orangs. It has been hinted that there are homologies--perhaps no less striking-- between chimpanzees, certain dements, and certain 'White' races on the one hand, and between Negroes and gorillas on the other. Possibly there is a fourth homology to be recognised, as Klaatsch thought. 102

Sera 103 has gone farther still, and described six man-monkey types. But he derives these six from three main stems corresponding on the whole to the three

here sketched.

PART III

EXPLICATIVE

Explanations do not, of course, really explain. At most they co-ordinate what, at first sight, are merely disjunctive and disparate observations and experiences, or series and groups of such observations, and experiences. We find explanations satisfactory, or valid, not as statements of absolute truth, but in so far as, and only so far as, they provide us with convenient mental drafts on the bank of experience that make for economy in expression and thought, for ease in the carrying out of our work, and for profit in investigation.

Unless the homologies that have been brought forward in this essay are ill-founded, and unless the observations recorded cannot be repeated in the experience of others, it is our business to find some *explanation* for them,

even if such explanation is found to be inconsistent with explanations already current in respect of previous and related observations. But we must not accept any new explanation as valid unless it is valid in respect of all that has been hitherto explained by the explanations that it displaces.

At the same time, even if our new explanation be found satisfactory, covering all relevant series of observations, and leading us to new and important verifiable deductions, we are not thereby under the necessity of accepting it as final. We will merely accept it as an intellectual and scientific convenience.

The explanation that we seek is one that will in the first place help us in respect of the occurrence of persons—imbecile or otherwise—in Western Europe who are of the Mongolian type; in the second place, in respect of the homologies between the Mongolian and the Orangoid types; and lastly, in respect of the homologies noted between (a) the Negro and

Gorilla and (b) between the Chimpanzee the subject of Dementia Precox, and certain 'White' racial types.

Any discussion must, in the first place, deal with the problem of 'the Mongol in our midst.'

Medical men have generally sought to explain the occurrence of Mongolian imbecility in a very simple fashion, although, as has been said, Dr. Reginald Langdon-Down and Mlle. Lutrovnik, as did originally Robert Chambers and Dr. Langdon-Down, senior, have attempted atavistic solutions. The atavistic hypotheses have, however, never found much favour.

Certain agreed facts may be stated. Mongolian imbeciles are usually the offspring of feeble, immature, or exhausted parents. Thus, an imbecile of this kind is often either the first child of young parents; the last child of a numerous family; or the only child of parents already elderly. Sometimes there is a clear history of maternal ill-health, debility, or privation. Sometimes there is parental syphilis or

tuberculosis. On these grounds an attempt has been made to explain Mongolian imbecility as the result of procreative insufficiency on the part of the parents. That this factor is present, in many cases, is doubtless true, but, obviously, if we consider recognition of its presence an adequate explanation, it can only be at the expense of tacitly admitting some specific reason for defect in parental energy resulting in the production of 'Mongols' rather than children of another racial type, or children that are simply foetal in character. Chambers saw as much, when he said that the procreation of children of Mongolian type resulted from marriage of parents too nearly allied, and so forth. But he used his observation of the occurrence of Mongoloid persons in England to uphold his theory of the descent of the Caucasian race from the Mongol or Yellow race; and his hypothesis of descent, to explain the occurrence of Mongoloids in England!

So the hypothesis of deficient [84]

procreative power, like Dr. Shuttleworth's explanation that Mongolian imbeciles are unfinished children.75 and Chambers' theory of consanguinity, fails to explain why all unfinished children, why all offspring of parents 'too nearly related,' why all children procreated by exhausted or immature parents are not Mongoloid, and why Mongolism, as it does, should avoid Mankind. certain races of Chambers' scheme of anthropogeny the absence of Mongoloids amongst the Negroes is explained, truly, but other points are left without elucidation.

Now, there are certain facts which point, without question, to the conclusion that Mongolism is, to some extent at least, hereditary. Certain Mongolian imbeciles and Mongoloids, as Chambers said, are the offspring of parents too nearly related. But, when this is so, Mongolism is evident in the parents. Consanguinity does not result in Mongolism unless the parents are Mongoloid.

Again, Hunter is without doubt [85]

right when he says that the parents of Mongoloid imbeciles are often unrelated but Mongoloid.

I would go farther, and say that I have never seen a Mongolian imbecile of whom one or both parents were not clearly Mongoloid and that, when both parents shew signs of Mongolism, the Mongolian children are more than usually resemblant to racial Mongols. fact, if we consider Occidental Mongolism as a unit-character in the Mendelian sense, and moreover as one that is associated with disadvantage rather than advantage in respect of development, we have a very fair 'explanation' of most of the medical facts concerning the parentage of Mongolian children. The fact, noted by Comby, that whole families of Mongolian imbeciles exist, and the further fact noted by others, that while sometimes both, sometimes only one of twins is Mongolian, are thus 'explained,' as well as the observation that, when Mongolism is marked in one member of a family, others may

shew the lesser stigmata and may appear only slightly Mongoloid.

Avoiding the Mendelian terminology, it would seem that, in Mongolism, we have a definite kind of character that is hereditary, that 'comes out' in proportion to its subsistence in parents, and that is most marked in those peculiar children whose parents, of Mongoloid physique, have the least procreative energy. So much may be agreed to even by those who reject all 'atavistic' explanations.

But, is it possible to dispense with all atavistic explanations? How are we to account for the occurrence of this Occidental Mongolism, unless some degree of atavism be admitted?

Certainly there is an hypothesis ready to hand—that of the dependence of physical characters upon gland-balance; but, not only does this hypothesis fail to explain the racial incidence of Mongolism outside the admittedly Mongolian races, it leads to one or other of two consequences; the admission of some 'atavistic'

explanation, or the rejection of all homologies as a 'guide to descent.'

What is this gland-balance theory? It is now a popular notion that certain human types--generally recognised as pathological-depend upon the excess or deficiency, in the body, of the products of one or more of certain glands known as the glands of internal secretion. Such glands are the gonads, the pituitary, pineal, thyroid, thymus, suprarenal, and other glands. gigantism and dwarfism are correlated with pituitary excess or deficiency; bronzing of the skin with suprarenal disease; thyroidal deficiency with cretinism: and so on. And Mongolian imbecility has been correlated, on good grounds, with a particular type of glandbalance. This correlation, now pretty generally adopted, was first put forward definitely by the present writer,16 and is supported by the results of treatment that he (see 18, 83) and Apert (see 21, 86) amongst others have obtained.

But, in the recognition of a special [88]

type of gland-balance as correlated with Mongolism in Western Europe, we have no complete explanation of the whole facts. That there is such a correlation, and that the special type of gland-balance involves the thyroid gland, cannot be disputed.

Many Mongoloid girls become myxoedematous in later life; many myxoedematous women are obviously Mongoloid; many Mongoloid children have been noted to have myxoedematous or sub-thyroidal mothers**; and we can very frequently demonstrate an obvious combination of Mongolism and a myxoedematous tendency in the mothers of Mongolian imbeciles.

This is not, however, all that is to be said. Some years ago, the present writer⁸² attracted by Sir Arthur Keith's recognition of pituitary excess as common to the Negro, the Gorilla, Neanderthal man, and those afflicted by what we call Acromegaly⁸¹—a notion originated by Dr. Harry Campbell, in part, at least—ventured to suggest that since certain 'pathological' types,

like Mongolian imbecility, resemble certain racial types, it might well be that in each case similar gland-balances obtained. And he went on, elsewhere to suggest that the acquisition, under stimulus from environmental circumstances, of particular types of gland-balance might lead or have led to the development and perpetuation of racial characters. Thus could we arrive at justification of some views put forward by Lamarck and by Agassiz.

But, though not at that time searching an atavistic explanation of Mongolian imbecility, he was much disappointed when, a few months later, Sir Arthur Keith gave his authority to the statement that, although it is true Nature has in these gland-balances a means at her disposal for rapidly altering morphological characters, there are yet no signs that she has resorted to such means in the past.⁸³

However it is now largely owing to the brilliant advocacy of Sir Arthur that to-day the hypothesis of racial origin or modification by means of

changes in gland-balance has become popular. Moreover Sir Arthur, while accepting the notion of a gland-balance involving the thyroid in the case of the imbeciles, has agreed that a similar kind of balance may obtain in racial Mongols, and does in the orangs. (See 35, 84). But he rejects all suggestion of atavism in connection with the imbeciles, and all notion of common descent as between racial Mongols and orangs, except of course so far as all human and anthropoid races are held to have some common source in the remote past. Now, if Mongolism in Western Europe is explicable on the grounds of (i) a special gland-balance similar to that of the racial Mongols (ii) determining all the anatomical, physiological, and psychological homologies that have been described, how, unless we adopt some theory of Common Descent, are we to explain the fact that, as can be definitely shewn, Mongolian imbecility and 'non-racial' Mongolism only occurs where 'Mongolian' ancestry, more or less

remote, is at least probable? On the other hand, how explain why Mongolian imbecility and non-racial Mongolism do not occur where, as amongst the true Negroes and Hindus, there is not any probability of common descent from a Mongolian or Orangoid phylum?

Lastly, how in any case do the advocates of the simple gland-balance explanation of Occidental Mongolism explain the *sporadic* occurrence—for such on their theory, it is—of Mongoloid and Orangoid children in Western Europe?

Macauliffe, in a recent work, 105 it is true, uses the following set of words: 106 que les conditions de milieu se modifient, la race se transforme, ce qui explique qu'il y ait, en dehors même de tout mélange, des noirs rappelant le type européen, des Mongols rappelant les Négritos et des Européens rappelant les Mongols. The Jacts here admitted by Macauliffe are amongst those which form the basis of this essay; his 'explanation' is no

explanation whatsoever, but a simple assertion of explanation.

And, as will be shewn presently, Macauliffe himself elsewhere seeks an explanation of the facts in atavism.

The case for atavism is indeed very strong, not only a priori, but a posteriori. Moreover, if we are to 'repress' all atavistic explanations when they are inconvenient, and are to say that newly-observed homologies must be regarded as superficial and of no evidential value just because they make certain currently received explanations not a little ridiculous, why then there is an end to all serious discussion. Up to the present, the only 'argument' brought forward against an atavistic explanation of Occidental Mongolism is the amazing statement that the examination of human remains has revealed no evidence of any Turanian or Mongolian invasion of Europe.84

Effective refutation of this point is provided, in a paper by Peake, in the *Jl. Roy. Anthrop. Inst.*, 1916, p. 156.

Great as is the causal importance of gland-balances in the determination of certain physical and psychical types, there is as yet no evidence that glandbalances determine the occurrence of specific variations in muscles, in bones, and in nerves, that are variations in kind rather than in degree. An excess or deficiency of the pituitary gland may determine whether or no the subject is tall, or his head long, or his There is no evidence at bones coarse. that gland-balances determine whether or no the peroneus tertius or the ligamentum teres should be present, or that a particular posture or mode of speech should be habitual.

We must recognise fully that there is correlation between gland-balance and type, and that, to an extent, this correlation is one implying a causal relation. But the causative relation must not be expanded unnecessarily and it is safer, at present, to consider gland-balance type as a character rather than as the only determinant of the primary physical and psychical types

into which we divide mankind. And, if for some purposes we base our phylogenies upon morphological resemblances, and for others refuse to do so, we must, in legal phrase, 'shew cause' for discrimination in favour of our prejudices.

Now, as already said, homology is a mental concept, obtained by comparison, that retains its validity under all circumstances, whether or no it finds its explanation in common descent.³⁰

In some circumstances homologies are not explained by theories of descent but in terms of 'environment.'

For the present case, however, no explanation that avoids all implication of atavism, or common descent, has any claim to more than very limited validity. It is claimed, on the other hand, that the demonstrated homologies do indicate at least the possibility of common descent. And Macauliffe¹⁰⁵ who, following Verneau¹⁰⁶ amongst recent writers, recognises in

Europe to-day not only Negroid types, but Neanderthal types, Cro-Magnon types and some others as well, admits, that in respect of these we must think of 'survivals' and of 'reversions.'

Speaking of certain Neanderthal characters 'qui peuvent s'observer sur les hommes contemporains 'he declares that 'lorsque nous les rencontrerons, nous devrons songer à l'étape qu'ils rappellent dans l'évolution générale de l'humanité, et si ces caractères s'observent assez nombreux chez un individu, nous devrons (et l'expérience nous donnera toujours raison) envisager celui-ci, quelle que soit la race à laquelle il appartienne sinon comme un type inférieur, du moins comme se rapprochant des types primitifs, par certains de ses attributs.'

'Bornons-nous à enregistrer pour le moment ces intéressantes observations '—he is speaking here of Verneau's recognition of Grimaldi types in North Italy—'elles suffiront à nous faire comprendre que lorsque nous trouverons des caractères négroïdes chez un individu vivant actuellement,

nous devrons penser à un atavisme partiel ou complet, à une survivance ou à une réapparition, c'est-à-dire en dernière analyse à un type plus ou moins archaïque, très éloigné des beaux types humains d'aujourd'hui nettement définis en morphologie.' The case for atavism as a valid explanation could hardly be better put.

Why then, should its recognition, as valid in the matter of Occidental Mongolism, be scouted, as it has been whenever, during the last ten or twelve years, it has been brought forward from the medical side?

Can it be that Anthropologists know nothing about our Mongolian imbeciles; or, can it be that Doctors care too little about Anthropology?

At any rate, the thesis now put forward is that Mongolism (or Orangism, if we prefer the term), wherever encountered, may be explained by an hypothesis of Common Descent for ail the homologous individuals; men, apes, and imbeciles.

Atavistic Mongolism (or Orangism)

then, appears under the circumstances generally agreed to accompany the procreation and development of Mongolian imbeciles in the Occident. typically orangoid imbeciles are those whose parentage is most Mongolian: the least typically Mongolian, in the racial sense, are those in whom the parentage is most 'mixed.' For these there has been, in early life, in uterine life, not merely deficient developmental impetus, but an hesitation, a faltering at the crossroads of development. Undecided which of the several indicated paths to take, there has been vacillation, confusion, blundering and regression, or a fall by the wayside after some little progress along the road that has seemed the more familiar

We need not travel in the three continents to see the three Faces of Mankind once aptly described by Linnaeus:—

HOMO Europaeus: Levis, argutus, inventor: regitur ritibus.



F S. 1. A "WHITE TYPE Bosn an Soldier



Fig. 9. A "WHITE TYPE Aran Const

. face p. 98



Fig. 1 HOMO AFER Out Rivers Chief



Fig. : HOMO ASIATICUS. (Chinese Mandarin.)

HOMO Asiaticus: Severus, fastuosus,

avarus: regitur

opinionibus.

HOMO AFER: Vafer, segnis,

negligens: regitur

arbitrio.

We can take our stand at Charing Cross and can see these three Faces of Mankind borne by native Londoners: we can visit our public asylums and see them in degraded form: and we can, at the Zoo and the Natural History Museum, see them caricatured by the noisy, mischievous and lascivious chimpanzee, the dignified, philosophic and self-sufficient orang, and the slow, cunning, and brutal gorilla.

Everywhere amongst us do these types segregate out, seeking their appropriate milieus: Homo Afer finds partners in the jazz-loving women of the night-clubs: Homo Europaeus (regitur ritibus) is seen participating with his kind in social and religious ceremony at the Ritz and the Cathedral; and Homo Asiaticus, after presidency among the elder statesmen, may retire to semi-

monastic seclusion and 'write Buddhist plays.'

The 'White' Hottentot Venus from the Midi still plys her trade in Soho; the 'ex-Service man' in the gutter exposes his frowsy cap for an obolus in the very attitude of the Hindu fakir and the asylum dement; in garrets at Chelsea clever people squat on cushions in a fashion that can be forecast from an examination of their heads, their eyes, their ears, their hands, and their ideas!

Let us consider the possibilities of some atavistic or reversionary hypothesis: and let us free our minds of any lingering belief in the existence of a single European race with brown first cousins in India, and elder brethren in Mesopotamia and elsewhere.

And so to explain away our Occidental Mongols: the Mongols in our midst.

After all, even to-day quite half the geographical extent of Europe is peopled by racial Mongols or semi-Mongols. The Turk is not yet expelled; the Finns still exist; the Lapps, whose

traffics with Scotland have been seen into by MacRitchie, still infiltrate the 'pure Nordic races' of Scandinavia; the Russian, if you scratch him, is still as much a Tartar as in Napoleon the First's time; and Poles and Magyars still bear the stigmata of racial Mongolism.⁸⁷

Moreover, even Mr. Wells (in his Outline of History) is right when he says that Mongolian invasions reached west into France during the earlier centuries of the Christian Era. If there has been such infiltration and persistence during the historical period—to say nothing of Consiglio's talk of the Venetian slaves of Mongol blood and their influence on modern Italian physique—there seems little need to look much farther in explanation of the cropping up of Mongolian characters in London to-day.

Sir James Cantlie—and he has lived in the East—is so convinced of the Mongolian strain in Europe that he has made the assertion that most European children, at or after birth, display some Mongolian characteristics.¹⁰⁷

The statement is, perhaps, an exaggeration, but it carries weight nevertheless.

However, if we look back, beyond the historical period, the evidence of 'Mongolian' influence in Europe become very strong.

Most anthropologists now divide up the European peoples into three groups: a Nordic group, an Alpine (or sometimes an Armenoid) group, and a Mediterranean group. And they find these groupings to have existed before the historical period. Now Marcellin Boules like Sollas and most other anthropologists, including Keith, finds the Alpine race to be representative of short-headed invaders from Central Asia, while, as MacRitchie well put it years ago, 88 there is ample evidence that Europe contained a truly Mongoloid population long before the era of Hun domination. He went on to say that even the European cavemen have never ceased to be represented by people who have inherited their blood. When he said this the

idea of Humboldt that a pre-Aryan race once spoke a Mongolian tongue in Europe, and the great 'Finnic' hypothesis of Arndt, Rask, and Retzius. connecting the Lapps, the Finns, and the Basque language was supported, on other grounds, by the work of Beddoe²² and of Boyd Dawkins. ²⁷

The latter had found Turanian and Mongoloid peculiarities in British skulls—past and present—while the skulls of Grenelle and Furfooz, on which Pruner Bey founded his 'Mongolian' hypothesis o—supported by de Quatrefages—must not be forgotten. 37

To-day, however, the evidence is overwhelming. Dr. Hose is eager and willing to defend his thesis⁴⁹ that the Mediterranean group of Europeans came from the far East, and were perhaps 'Malay.' There is no one who has seen an Eastern pile-dwelling; who has reflected at Venice, Chioggia, and Torcello; and who has seen what remains of the lacustrine dwellings in Italy, Switzerland, and Britain; but

can have had the notion cross his mind.

Indeed, Munro seems only to express general opinion when he writes¹ of the constant stream of brachycephalic immigrants into Europe at the dawn of the Neolithic period.

Turning however our gaze yet farther back, we are bound to accept recognition of the Chancelade skull (see 102. 103, 105) as Eskimo -- and therefore ' Mongolian '-whilst Hrdlicka's discovery, in remote Northern Asia, of a ' people allied to Palaeolithic Europeans and existing American Indians 's supports Sollas' dictum that, in the Magdalenian epoch, two races now represented by Eskimo and existing American Indians extended across Europe and Asia. But it was, of course, Boyd Dawkins who, following Hamy⁹² in assimilating the Eskimo and Magdalenian cultures, first definitely asserted that cave-men of Britain and France were, in remote times, in touch with inhabitants of Northern Asia, and that cave-men probably first came

Europe with the northern mammalia from Northern Asia, and retreated with them thereto at the close of the Pleistocene period.*3

So too Mr. Wells, who in a sentence of extraordinary perversity says that some anthropologists have suggested the origin of the Chimese from the Chimpanzee (sic) recognises, in a footnote, that there is in most European peoples a streak of the blood that is predominant in the Mongolian and American peoples.⁹⁴

Such an admission from any competent anthropologist is all that is required to prevent the summary dismissal of the theory of Common Descent as an explanation for the occurrence, in our midst, of persons who, whether imbecile or talented, are 'Mongols through and through.'

But, as a matter of fact, every competent anthropologist now admits that, at the close of the Palaeolithic period there were living, in the south and west of France, races which severally displayed the characters and culture of

primitive White, Yellow, and Black Man. One citation must suffice. Marcellin Boule declares that 'il est intéressant d'observer que si ces Hommes, groupés autour du type dit Cro-Magnon, sont déjà des Blancs, ils offrent parfois de nombreuses resemblances, d'une part avec les Jaunes, d'autre part avec les Noirs.'

If then the atavistic hypothesis is valid for our native Mongols, it is no less valid for our fewer, but still remarkable white 'Negroids,' and for our interesting (possibly 'Sumerian') sufferers of the dementia precox and microcephalic types.

The 'atavistic' explanation offered for the homologies between our indigenous primitives and the three cardinal racial types holds good, however tested.

At the point at which we have arrived, no theory of human origins is in any respect compromised. Certainly no theory of the origin of human races is affected. Our explanation generalizes admitted facts, and it is, for the moment

irrelevant to consider how it came about that, at the end of the Palaeolithic period, the White, the Black, and the Yellow types came to exist side by side in France, as they do to-day.

The second problem now arises. No explanation has been put forward of the homologies between the Mongolian and the Orang, the Negro and the Gorilla, and a certain type of 'White'— I am tempted to say, the Semitic— and the Chimpanzee.

In Science, no system of anthropogeny that disregards the dogma of human evolution from a simian stock has now-a-days any interest.

There are however, almost as many schemes of evolution as there are anthropologists. But all these schemes may be reduced, for present purposes, to two groups.

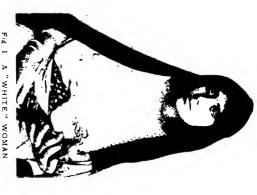
We have, first, the so-called monophyletic schemes, which involve the supposition that one primitive human stock split off somewhere and somewhen from the primitive Primates, and that the great anthropoid apes split

away in the same fashion, earlier, later, or at the same time. Marcellin Boule⁹² gives a convenient diagram in explanation of all these.

Let us consider that of Sir Arthur Keith, who, as all the world knows, postulates a division of the life-trunk of the Primates during the Oligocene into two stems, whereof the one gave rise to all past and present varieties of Man, and the other to all past and present varieties of great anthropoid apes.³⁹

By this scheme, the humanoid stem cast off branches during the Pliocene, and, in the Pleistocene, divided into African, Australian, Mongolian, and Indo-European ('White') stems. The anthropoid stem cast off, in the Pliocene, an orangoid branch, and, later, divided into chimpanzoid and gorilloid twigs that remain still approximate.

Now, obviously, this scheme is perfectly compatible with all that has been said as to the existence of Negroid and Mongoloid persons amongst us to-day, and with an atavistic, or cousinly explanation of them.



A WHITE WOMAN.



(Nera: Type) 11 tee : 108



Fig. 2 A" BLACK ' WOMAN

(Youth a)

(Yage F 709)

F.6 1 A VELLOW WOMAN, Conn.c., PLATE XXVII

But it entirely fails to explain the homologies between the Semite and the Chimpanzee, the Mongol and the Orang, the Negro and the Gorilla. If indeed it is to be maintained, we must declare that homologies have no evidential value in respect of descent. Under these circumstances we may as well adopt at once the hypothesis, or belief, of a Creative origin, and a later dispersal into Semitic, or 'White'; Hamitic, or Black; and Japhetic, or Yellow races.

That, I am sure, is not the desire of any modern anthropologist. Therefore, since what has been said in criticism of Sir Arthur Keith's scheme applies equally to all schemes of a monophyletic complexion, it is perhaps worth while examining what there may be in favour of certain polyphyletic schemes which postulate a separate origin from the parent trunk of primitive stocks, each of which gave off later a humanoid and a simian branch.

Haeckel, it will be remembered, some years ago¹⁶ went some way along

this road. Struck by the homologies between the Mongol and the Orang, he postulated a proto-Mongolian and orangoid stem, but pushed too far in the direction of making the Malayan and the Orang the primitive representatives of Man and the anthropoid apes. The scheme, valuable and suggestive as it was, broke down. And, as Duckworth has said, some polyphyletic scheme seems called for and destined ultimately to be accepted.

Now there is just one scheme, or set of schemes, that appears consistent with all that has here been said in respect of the human and ape homologies. It is a scheme that is consistent with philological conclusions, (see 4, 96) with Gobineau's philosophy² and with some recent hints of Sir E. Ray Lankester. 1 It is, moreover, a scheme which at one and the same time explains, and is supported by, what has been said in this essay concerning Posture. This question of Posture is one of fundamental importance. It relates to intellectual

development and life. Man became what he now is when he learned to sit and really think how to act, and the ways in which men think are still indicated by the ways in which they sit when they think. This is true also of the great apes; their Postures indicates their mentality, and our several and diverse affinities with them are indicated in our Postures.

These homologies in Posture should then be reckoned with in all schemes of descent.

But they are only explicable by one: that generally associated with the name of the late Professor Klaatsch** 102.

I am well aware of the violence—not of the criticism, but perhaps rather of the opposition—that has been excited by his notions, and am not in the least concerned to defend them.

All systems, said Etienne Geoffroy, are imperfect: the perfect system cannot exist; it is a sort of philosopher's stone. The perfect system, certainly, is as unattainable by purely rational

methods as is the squaring of the circle, the settlement of the question of universals, or the final reconciliation of any of the classical philosophical and mathematical antinomies. But this does not make Klaatsch's notions any the less interesting. We may call his scheme an hypothesis, if we will. Peut-être bien, as said recently a celebrated Frenchman—in another context, it is true—mais, sa ne fait mal à personne!

Now Klaatsch, as Thacker puts it, originally regarded the great apes as degenerate offspring from one prehuman stock which, in adapting themselves to special conditions of life, sacrificed important parts. They cut off one way of upward development by reducing the thumb, for example. Whilst they did this, other branches, more favoured, evolved upward (still however retaining primitive characters) and became the races of mankind.

But later, Klaatsch (whose thoughts were driven in a certain direction by many convergent impulses) as a result

MAN AND HIS THREE FACES

of study of the Combe Capelle skeleton, that he called *Homo aurignacensis Hauseri*, formulated the notion, that, in the beginning of Man's history, two types stood out from amongst a welter of propithecanthropoids dispersed from the now sunken Indonesian continent. Of these, one that he called the A/O type (or Aurignacian-Orangoid) became the parent stem of Mongols and of Orangs; the other, that he called the N/G type (or Neanderthal-Gorilloid) became the parent stem for the Negroes and the Gorillas⁹⁸, ⁹⁹.

Now this is interesting. Although the difference in posture between the Mongol-Orang and the Negro-Gorilla, had apparently escaped Klaatsch's attention, it was the difference between the femurs of the Gorilla and Orang on the one hand and the like difference between the femurs of Neanderthal man (or the Negro) and the Aurignacian man (or Mongol) on the other that attracted his notice.

But, some of the differences noted by Klaatsch are amongst those which,

given the posture, should be deduced; or, given the femurs, should lead to correct deduction in respect of habitual posture. Klaatsch frequently modified details in his theories it is true, and his pupils have extended them. amongst these modifications is one suggesting the appearance of a primitive 'Mesopotamian' type whence sprung Chimpanzees and chimpanzoid man (See Plate XXIX). Latterly, Klaatsch himself inclined to the notion that there had been perhaps a fourth primitive man-ape type or sub-type. It is very probable that such a sub-type, with square head and face (resembling the gibbon) can be recognised both racially and amongst us and our degenerates: but that need not concern us now. What is important is to note that Klaatsch's scheme helps us to understand the composite nature of the populations of Europe; well 'explains' the pathological observations made by physicians such Langdon-Down; interests us in the occurrence of the 'racial' types—

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White, Black and Yellow—that we can pick out amongst ourselves; illuminates for us much that is obscure in respect of the Piltdown, Obercassel, and other skulls; enables us to recognise the several affinities of the still extant Bushmen and Australians; and clears up some points made by the anthropologists in respect of recapitulation, as well as supporting what has been said in respect of the orangoid character of the Mauer jaw. 103

Moreover, quite recently, Klaatsch's notions have, in a way, received striking support from Sera¹⁰³ who lays great stress upon the facial resemblances between racial human types and the various types of ape and monkey. It is not necessary to say that Sera's work agrees with much of what has been pointed out by the present writer. But it has gravely disturbed orthodoxy and has been little discussed.

At the end, then, we are driven to declare that Vogt was very nearly right when, in face of bitter opposition he maintained his twin theses: those

of polygeny in respect of the human race, and atavism in respect of many imbeciles. 100

As Gobineau said: we have, all round us to-day, representatives of all past and present racial types.³ Most profitably, we may reduce these types to three; Semite, Mongol, and Negro They are reflected for us in the Chim panzee, the Orang, and the Gorilla.

And, after all, Langdon - Down's brilliant observation, that an ethnic classification of imbeciles can be sustained, still stands.

We need not, perhaps, concern ourselves unduly about the historical value of Klaatsch's hypothesis. From the scientific point of view that hypothesis is best which is most useful in economising labour and in assisting us to gain knowledge and understanding. Even if we prefer to believe the Noachian story, we may do so, since it gives us a picture that is valuable And, after all, nothing is more re-

MAN AND HIS THREE FACES

markable than that anthropologists and palaeontologists should now be forced, at every point, to recognise the importance of the Three Faces of Mankind: seen in the poet's vision, but already perpetuated in the story of Shem, of Ham, and of Japheth. As some one said recently, that story is at least 'quite a good myth.'

And there is always a point of view, other than the 'scientific,' that is worth consideration.

If we examine closely, and from a certain angle, the Louvre version of the Virgin of the Rocks, already commented on (Pl. XXVIII) we can see, concealed in the folds of the Angel's robes, the form of an Ape.

Behind the Angel, and with his back turned from the light, is a gloomy and gigantic head and torso, emerging from the soil:

' da mezzo il petto uscia fuor della ghiaccia'

This is

'Lo imperador del doloroso regno' on whose head were the Three Faces.

Behind the Ape, and looking towards us, is the mask of a foetus, that might be human, or merely that of an ape.

But the Ape himself, following the gaze of the Earth-Child, is looking forwards, and upwards.

Like Disraeli the Jew on a memorable occasion, the Ape is here 'on the side of the Angels.'

The problem of the Three Faces is then no new one. Dante, da Vinci, Sir Thomas Browne: each solved it in his own fashion. How—if ever—will the question be answered finally by Science?

For, as Jung has lately reminded us, whatever we strive to fathom with our intellect alone will end in paradox and relativity, if, indeed it be honest work and not a mere *petitio principii* in the interests of convenience.



DETAIL FROM "IA VIERGE AUX ROCHERS"

Chrustise V 1 t Chrustise se Aude

v!

* *******

Potonorate (misse

Fig. 2. THE ORIGIN OF HUMAN RACES (after Stratz)

Lersodemen



AFRICA

PLATE XXIX

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